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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,347

03/30/2004

Gilbert Lavielle

S403DIV

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10/15/2004

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EXAMINER

HUANG, EVELYN MEI

ART UNIT

PAPER NUMBER

1625

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/813,347	Applicant(s) LAVIELLE ET AL.	
	Examiner Evelyn Huang	Art Unit 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-24 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 19-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/400,358.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Claims 19-24 are pending.

Priority

2. This application is the divisional application of 10/400358. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

Specification

3. The abstract of the disclosure is objected to because the meaning of 'Medicaments' by itself in the last line is unclear. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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The 'cognitive disorders, impulsive disorders, disorders of the libido and sexual dysfunctions, sleep disorders, appetite disorders' in the method claims reaches out to as yet unidentified 'cognitive disorders, impulsive disorders, disorders of the libido and sexual dysfunctions, sleep disorders, appetite disorders', the description of which is not found in the specification.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19-24 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for treating depression bulimia and anorexia and for inhibiting penile erection, does not reasonably provide enablement for all the other disorders as recited. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

a. *Nature of the invention.*

The instant invention is drawn to the method of using a 5-HT_{2c} antagonist indoline compound in the treatment of depression, schizophrenia, Parkinson's disease, migraine, cognitive disorders, impulsive disorders, disorders of the libido and sexual dysfunctions, sleep disorders, appetite disorders, bulimia and anorexia.

b. *State of the prior art and the level of the skill in the art.*

5-HT receptors are known to have subclasses differing in their structures, regional distribution, pharmacology, modes of actions, and functions (Wijngaarden et al. Recl. Trav. Chim. Pays-Bas, 1993, 112:126-130; Barnes et al. Neuropharmacology, 1999, 38: 1083-1085 and 1107-1110, pages 1085-6). While 5HT_{2c} receptor has been implicated in many physiological responses, the functional effects unequivocally associated with activation of 5HT_{2c} receptors are

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hypolocomotion, hypophagia, anxiogenesis, penile erection and dopamine release (Barnes, page 1110, Table 8). The nexus between schizophrenia, Parkinson's disease, migraine, and the generic classes of disorders embracing opposite and conflicting conditions arising from different origins, (such as cognitive disorders, impulsive disorders, disorders of the libido and sexual dysfunctions, sleep disorders, appetite disorders), and 5HT_{2c} receptor has not been fully established.

The level of the skill in the 5-HT_{2c} receptor antagonist art is high.

c. *Predictability/unpredictability of the art.*

The high degree of unpredictability is well recognized in the 5-HT receptor ligand art. A slight change in the structure of the compound would drastically alter its affinity and selectivity (Wijngaarden et al. Recl. Trav. Chim. Pays-Bas, 1993, 112:126-130, pages 129-130, Fig. 6, Fig. 7, Fig. 8). One of ordinary skill in the art therefore would have no basis to extend the experimental data to compounds structurally remote from the tested compounds. Furthermore, the degree of unpredictability would be even higher in the more complex in vivo situation.

d. *Amount of guidance/working examples.*

Preparation of example compounds has been described.

The procedures for measurement of the extracellular concentration of dopamine and noradrenaline in the frontal cortex of the conscious rat, the procedures for the penile erection test in the rat, for the social interaction test in the rat and the Vogel conflict test are described in Examples 5-8 of the specification. Results are shown for the compound of Example 1.

e. *The breadth of the claims.*

Applicant's assertion that all the inventive compounds would be effective in treating schizophrenia, Parkinson's disease, migraine, any cognitive disorders (arising from different origins involving different mechanisms, including delirium, dementia and amnesia), any appetite disorder (including the conflicting hyperphagia and anorexia), any disorder of thermoregulation (including the opposing hypothermia and hyperthermia), any sleep dysfunction (including the conflicting insomnia and narcolepsy) or any sexual dysfunction (including the conditions involving the opposing inhibitory and stimulatory sexual behaviors) does not commensurate with

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the scope of the objective enablement, especially in view of the high degree of unpredictability in the art, the limited working examples and the non-establishment of the nexus between the antagonism of 5HT_{2c} receptor and the recited disorders/conditions (paragraphs b, c, d above).

f. *Quantitation of undue experimentation.*

Since the instant 'cognitive disorders', 'appetite disorders', 'impulsive disorders', 'sleep disorders', and 'disorders of the libido and sexual dysfunction' etc. are general classes of disorders embracing opposing and conflicting conditions arising from diverse origins, it is impossible to use a single 5HT_{2c} receptor antagonist compound of the instant to treat all these contradictory conditions (see paragraph 2 above). Furthermore, in view of the high degree of unpredictability in the art, the limited working examples and the fact that the breadth of the claims does not commensurate with that of the objective enablement, and that the nexus between the antagonism of 5HT_{2c} receptor and the recited disorders/conditions has not been established, the disclosure as presented would not allow one of ordinary skill in the art to use the invention as claimed without undue experimentation (paragraphs b-e above).

Conclusion

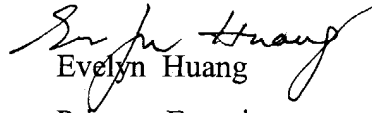
6. No claims are allowed.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evelyn Huang whose telephone number is 571-272-0686. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Evelyn Huang

Primary Examiner

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